

SOLAR PV WIRE · SINGLE CORE · BARE OR TINNED COPPER · EB XLPO · HALOGEN FREE · 2000 V

INDOCABLES COPPER SOLAR CABLE

PHOTOVOLTAIC POWER CABLE — UL 4703, 2000 V

INDO CABLES ITEM CODE

IC-S0-01-«SIZE»-CU|TC-E2X-PV-2000-UL4703-UV-ZHFR

Size field = AWG / KCMIL token

CU = bare copper · TC = tinned copper

Per-size item codes in the ordering table

DERIVED — NOT YET IN REGISTER

The Product Code Master holds the solar line only as tinned copper XLPO to EN 50618, 1.5 kV DC, in metric sizes. These codes are derived from the register's own code structure using conductor CU or TC, insulation E2X, designation PV, voltage 2000, standard UL4703 and options UV and ZHFR. The register carries no AWG / KCMIL size vocabulary, no 2000 V grade and no UL 4703 standard — the code steward must add all three and issue item IDs before quoting or sale.

APPLICATION

INDOCABLES PV halogen free flame-retardant Copper conductor, E-Beam crosslinked Polyolefins insulated Wire is designed to use in Outdoor Solar application as per NEC 690 in wet & dry location. The cable is rated direct burial, Sunlight resistant and weatherproof.



Figure 2 — Single core wire, stranded bare copper conductor under black EB XLPO insulation.

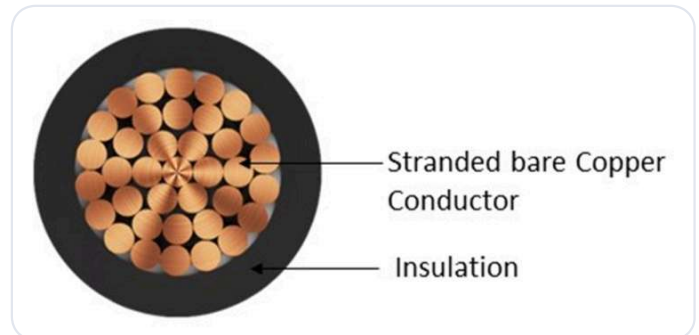


Figure 1 — Cross section: stranded bare copper conductor, insulation.

Images not to scale. Follow table for dimensions

CHARACTERISTICS

CONSTRUCTION

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91807833289

91808810785

917011005815

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VOLTAGE RATING

Max. Rated Voltage: 2000 V

Max. Short circuit temp: 250 °C

OPERATION TEMPERATURE

Fixed: -40 °C to +90 °C

BENDING RADIUS

Fixed installation: 8-10 D

TEST VOLTAGE

As per UL 44

CONDUCTOR

Stranded (Class B) Bare or Tinned Copper conductor as per ASTM B3, B33 & ASTM B8

INSULATION

Halogen free Flame retardant E-Beam crosslinked Polyolefins

CORE IDENTIFICATION

(-ve) Black, (+ve) Red

OUTSTANDING FEATURES


Flame retardant



UV, Ozone resistant


 High temperature
resistant

 Oil and Gasoline
resistant


Moisture resistant


 Meets cold bend and
cold impact at -40
°C

STANDARD FOLLOWS

UL 4703

ASTM B8

UL 44

UL 854

UL 1685

CSA C22.2 No. 271

COMPLIANCE

UL 854	for USE-2
UL 44	for Type RHW-2
UL 4703	for Type PV
UL 1685	CT Flame rated (for 1/0 AWG and above)
c(UL) CSA C22.2 No. 271	RPVU90
ANSI ICEA S 95 658	NEMA WC70
FT1, FT2, FT4, VW-1	Flame test ratings
NEC NFPA 70	NEC 310, NEC Section 690.31
EPA 40 CFR part 261	for leachable lead content per TCLP
RoHS and REACH	compliant
OSHA	acceptable
Federal Spec A-A-59544	Cable and wire, electrical (power, fixed installation)

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DIMENSIONAL AND ELECTRICAL CHARACTERISTICS

NO. OF CORES No.	CONDUCTOR SIZE AWG/KCMIL	NO. OF STRANDS No.	NOMINAL INSULATION THICKNESS mm	NOMINAL OVERALL DIAMETER APPROX. mm	NOMINAL OVERALL DIAMETER APPROX. mil	MAX. CONDUCTOR D.C. RESISTANCE AT 25 °C Ohms/Km	AMPACITY IN AIR Amps	AMPACITY IN EARTH Amps
1	12	7	1.90	6.3	248.03	5.46	40	30
1	10	7	1.90	7.0	275.60	3.42	55	40
1	8	7	2.15	8.3	326.77	2.14	80	55
1	6	7	2.15	9.2	362.21	1.35	105	75
1	4	7	2.15	10.5	413.39	0.847	140	95
1	2	7	2.15	12.1	476.38	0.532	190	130
1	1	19	2.66	14.2	559.06	0.421	220	145
1	1/0	19	2.66	15.2	598.43	0.335	260	170
1	2/0	19	2.66	16.4	645.67	0.266	300	195
1	3/0	19	2.66	17.8	700.79	0.211	350	225
1	4/0	19	2.66	19.3	759.84	0.167	405	260
1	250	37	3.04	21.3	838.58	0.142	455	290
1	300	37	3.04	22.7	893.7	0.118	500	320
1	350	37	3.04	24.1	948.82	0.101	570	350
1	400	37	3.04	25.3	996.06	0.088	615	380
1	500	37	3.04	27.5	1082.68	0.071	700	430
1	600	61	3.43	28.93	1138.98	0.059	780	475
1	750	61	3.43	33.2	1307.09	0.047	885	535
1	1000	61	3.43	37.2	1464.57	0.035	1055	615

*Above values are approximate and subject to standard manufacturing tolerance

*The above Current Rating is based on NEC Table No. 310.16 at ambient temperature of 30 °C

DE-RATING FACTOR

Current de-rating factors at various ambient temperature.

AMBIENT TEMPERATURE °C	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80
CORRECTION FACTOR	1.04	1	0.96	0.91	0.87	0.82	0.76	0.71	0.58	0.41

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ORDERING — INDO CABLES PRODUCT CODES

Single core, stranded Class B copper, halogen free flame retardant E-beam crosslinked polyolefin insulated, unsheathed, unarmoured, 2000 V, to UL 4703. Codes below are derived from the register's code structure — line SO, cores 01, conductor CU for bare copper, insulation E2X, designation PV, options UV and ZHFR in alphabetical order. For the tinned copper option, swap CU for TC in the same position. The size tokens are proposed: A···· for AWG gauges, A0··· for aught sizes, M···· for KCMIL.

SIZE AWG/KCMIL	DERIVED ITEM CODE — BARE COPPER
12	IC-S0-01-A0012-CU-E2X-PV-2000-UL4703-UV-ZHFR
10	IC-S0-01-A0010-CU-E2X-PV-2000-UL4703-UV-ZHFR
8	IC-S0-01-A0008-CU-E2X-PV-2000-UL4703-UV-ZHFR
6	IC-S0-01-A0006-CU-E2X-PV-2000-UL4703-UV-ZHFR
4	IC-S0-01-A0004-CU-E2X-PV-2000-UL4703-UV-ZHFR
2	IC-S0-01-A0002-CU-E2X-PV-2000-UL4703-UV-ZHFR
1	IC-S0-01-A0001-CU-E2X-PV-2000-UL4703-UV-ZHFR
1/0	IC-S0-01-A0001-CU-E2X-PV-2000-UL4703-UV-ZHFR
2/0	IC-S0-01-A0002-CU-E2X-PV-2000-UL4703-UV-ZHFR
3/0	IC-S0-01-A0003-CU-E2X-PV-2000-UL4703-UV-ZHFR
4/0	IC-S0-01-A0004-CU-E2X-PV-2000-UL4703-UV-ZHFR
250	IC-S0-01-M0250-CU-E2X-PV-2000-UL4703-UV-ZHFR
300	IC-S0-01-M0300-CU-E2X-PV-2000-UL4703-UV-ZHFR
350	IC-S0-01-M0350-CU-E2X-PV-2000-UL4703-UV-ZHFR
400	IC-S0-01-M0400-CU-E2X-PV-2000-UL4703-UV-ZHFR
500	IC-S0-01-M0500-CU-E2X-PV-2000-UL4703-UV-ZHFR
600	IC-S0-01-M0600-CU-E2X-PV-2000-UL4703-UV-ZHFR
750	IC-S0-01-M0750-CU-E2X-PV-2000-UL4703-UV-ZHFR
1000	IC-S0-01-M1000-CU-E2X-PV-2000-UL4703-UV-ZHFR

No item IDs are shown because none of these nineteen items exists in the Product Code Master yet. Offering both bare and tinned copper doubles the count to thirty-eight. The register's next free ID for this item class is IC1006462. UL 4703 is not an IS standard, so no BIS CM/L number applies to these items.

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CERTIFICATIONS & COMPLIANCE



ISO 9001

Cert. 99 100 22646 (TÜV SÜD)



ISI

Bureau of Indian Standards



RoHS

Compliant



REACH

Compliant



Make in India

Manufactured in India

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